

**Client questions:**

How do you currently burnish threads?

- Drill in and out
- Use cordless drill to move lead screw in and out

How do you currently measure backlash?

- Put turret in gauge
- Push on lead screw
- Measure change on dial indicator

Do you still have the previous prototype thread burnisher?

- yes

What problems did you have with the previous thread burnisher?

- No real problems
- Wasn't automated enough
- Not finished

Do you want to have in person meetings and if so how often?

- Biweekly, Wednesday evening, 6:30 Alehouse

Is there a size and weight constraint?

- Fit on table

How fast does the process need to be?

- As fast as current
- 1-15 min current
- 3-5 min average

Do you expect to have a feed/magazine system?

- 1 turret fine
- More is better

Why didn't you like the torque sensor/why didn't it work for you?

- It worked

What type of grease/lapping compound are you using for the thread burnishing?

- No lapping compound
- Grease and MEK used

Do you want this system to automatically grease threads?

- Grease manually
- Possibly coolant

How many different parts need to be burnished?

- 6 different models

Are the tolerances different for the different models?

- Yes

What is the reject and why are parts rejected?

- Have total reject rate
- Want to separate turrets by fail rate
- Engineer says burnishing issue
- Burnishers say machining issues

Is there any useful data the machine can gather?

- Starting torque value very useful
- "First pass torque"
- Any more couldn't hurt

Is there any hysteresis observed when the direction of applied torque is reversed?

- Not Particularly

Is the acceptable torque range different for different models?

- No specific torque range
- What feels good

Is acceptable backlash range different for different models?

- Yes depends on model
- Values and force application redacted

What range of angular position needs to meet the backlash tolerance?

- Middle of travel
- Not particularly critical

Is there any critical torque testing for hand burnished threads?

- No current torque specs
- What feels good

How do want this thing to work?

- Put it in
- press go
- it says when it's done

**Additional Info:**

Material

- Ampco 45
- Steel for one
- Aluminum for another

Must be burnished on same thread

Have jig to hold turret while burnishing

2-5 turns total used to adjust scope